

Observations of Comet a 1890 (Brooks), made at the Royal Observatory, Greenwich.

(Communicated by the Astronomer Royal.)

The observations were made with the East or Sheepshanks equatoreal, aperture 6·7 inches, by taking transits over two cross wires at right angles to each other, and each inclined 45° to the parallel of declination.

Comet a 1890 (Brooks).

Greenwich Mean Solar Time.			Observer.	☉—★ R.A.		Corr. for Refraction.	☉—★ N.P.D.		Corr. for Refraction.	No. of Comp.	Apparent R.A.			Log. factor of Parallax.	Apparent N.P.D.			Log. Factor of Parallax.	Comp. Star.
d	h	m s		m	s		′	″			h	m	s		°	′	″		
1890. April	16	15 2 55	H.	— 1 28·42	0·0	— 8 8·8	— 0·4	3	— 8 8·8	— 0·4	3	21 9 19·40	9·5530	70 36 42·6	0·7605	a			
	16	15 7 24	...	— 0 45·25	0·0	+ 0 15·5	0·0	5	+ 0 15·5	0·0	5	21 9 21·52	9·5496	70 36 39·4	0·7482	b			
	29	13 17 7	L.	+ 0 40·25	0·0	— 8 34·1	— 0·4	4	— 8 34·1	— 0·4	4	21 1 33·91	9·6132	61 32 31·8	0·7400	c			
	13	39 41	...	+ 0 45·00	0·0	+ 11 17·9	+ 0·6	6	+ 11 17·9	+ 0·6	6	21 1 33·19	9·6022	61 32 6·7	0·7202	d			
	13	53 17	...	+ 3 17·75	0·0	+ 4 19·9	+ 0·2	2	+ 4 19·9	+ 0·2	2	21 1 32·79	9·5922	61 31 34·4	0·7065	e			
May	13	53 17	...	+ 2 43·75	0·0	+ 10 48·4	+ 0·5	2	+ 10 48·4	+ 0·5	2	21 1 31·99	9·5922	61 31 35·8	0·7065	f			
	30	13 24 12	H.	— 0 20·59	0·0	+ 0 9·2	0·0	6	+ 0 9·2	0·0	6	...	9·6122	...	0·7259	g			
	13	37 52	...	+ 3 31·83	0·0	— 3 47·2	— 0·2	2	— 3 47·2	— 0·2	2	21 0 39·22	9·6032	60 44 26·6	0·7108	h			
	13	50 4	...	— 3 28·33	0·0	+ 0 35·0	0·0	2	+ 0 35·0	0·0	2	...	9·5964	...	0·7013	i			
	1	13 20 45	A.D.	+ 0 42·83	0·0	+ 0 4·5	0·0	6	+ 0 4·5	0·0	6	...	9·6136	...	0·7185	j			
	1	13 37 35	...	+ 1 34·33	0·0	+ 11 35·7	+ 0·4	3	+ 11 35·7	+ 0·4	3	20 59 31·33	9·6028	59 56 47·2	0·7008	k			

May 1890.

Comet a 1890 (*Brooks*).

Assumed Mean Places of Comparison Stars.

	Star's Name.	R.A. 1890 ^o .			N.P.D. 1890 ^o .			Authority.
		h	m	s	°	'	"	
<i>a</i>	W.B. (2) xxi. 207	...	...	21 10 48.52	70	44	37.3	Lamont
<i>b</i>	W.B. (2) xxi. 185	...	...	21 10 7.44	70	36	10.0	"
<i>c</i>	Lalande 40906	...	...	21 0 53.86	61	40	50.5	Lalande
<i>d</i>	W.B. (2) xx. 1834	...	...	21 0 48.39	61	20	32.3	Weisse's Bessel (2)
<i>e</i>	W.B. (2) xx. 1765	...	...	20 58 15.22	61	26	58.4	"
<i>f</i>	W.B. (2) xx. 1780	...	...	20 58 48.43	61	20	31.0	"
<i>g</i>	B.D. + 29° 4304...	...	...	21 0 55	60	45		B.D., vol. iv.
<i>h</i>	Lalande 40763	...	...	20 57 7.52	60	47	57.9	Lalande
<i>i</i>	B.D. + 29° 4326	...	...	21 4 3	60	43		B.D., vol. iv.
<i>j</i>	B.D. + 29° 4292	...	...	20 58 52	59	57		"
<i>k</i>	W.B. (2) xx. 1761	...	...	20 57 57.12	59	44	55.0	Weisse's Bessel (2)

Notes.

May 1. Comet merely a patch of light; sky hazy.

The observations are corrected for refraction, but not for parallax.

The initials A. D., L., and H. are those of Mr. Downing, Mr. Lewis, and Mr. Hollis respectively.

Royal Observatory, Greenwich:
1890 May 7.

K K

Catalogue of 918 Radiant Points of Shooting Stars observed at Bristol. By William F. Denning.

My observations of shooting stars date from the great display of Leonids in November 1866, though for several years they were merely pursued in a desultory way. In 1870 and at subsequent periods I furnished notes to the British Association Committee on Luminous Meteors, and thereafter adopted a more systematic plan of recording the paths of shooting stars. It was not, however, before the spring of 1876 that I entered upon any lengthy and regular observations with the design of ascertaining the radiant points of the minor showers generally. From 1876 until the present time I have been more or less engaged in gathering materials, though during the years from 1880 to 1883 inclusive I effected little, my leisure being applied to telescopic observations. The following summary shows the number of meteor paths which were registered in each year or, when the results were few, in a series of years :—

Year.		Year.	
1873-4	185 meteors.	1880-4	492 meteors.
1876	786 „	1885	1109 „
1877	1929 „	1886	1162 „
1878	501 „	1887	1809 „
1879	663 „	1888-9	541 „

Total, 1873-89, 9177 meteors.

Several thousands were seen, in addition to these, either during habitual watches or casually ; but many of them belonged to showers which were already sufficiently determined, or were not observed with a degree of accuracy entitling them to record.

Below I give a table exhibiting the time spent in observation in each month, the number of meteors seen and registered, the horary rate of their apparitions, and the number of radiant points derived from them :—

Month.	Hours of Obs.	Meteors Seen.	Meteors Registered.	Horary Rate.	Number of Radiants.
January	58	346	300	6·5	34
February	28	128	119	4·9	11
March	29 $\frac{3}{4}$	178	164	6·6	19
April	96 $\frac{1}{4}$	580	510	6·6	63
May	58 $\frac{1}{4}$	281	274	5·2	25
June	64 $\frac{1}{4}$	292	260	4·9	25
July	157 $\frac{1}{4}$	1545	1208	11·3	129
August	232 $\frac{1}{4}$	3412*	1751	11·3†	178
September	154 $\frac{1}{2}$	1391	1162	10·3	121
October	174 $\frac{3}{4}$	1751	1480	11·8	127
November	140 $\frac{1}{4}$	1351	1244	11·3	114
December	104 $\frac{1}{4}$	828	705	8·9	72
Total	1297 $\frac{3}{4}$	12083	9177	8·3	918

* Of these 1118 were Perseids.

† Perseids omitted.